

A REVIEW OF THE SUBSPECIES OF THE YELLOW CANARY, *SERINUS FLAVIVENTRIS* (SWAINSON)

By

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INTRODUCTION

Five subspecies of the Yellow Canary, *Serinus flaviventris*, have been described: *flaviventris* (Swainson) from 'South Africa'; *marshalli* Shelley from Potchefstroom; *guillarmodi* (Roberts) from Sanqubetu Valley, Basutoland; *damarensis* Roberts from Windhoek; and *aurescens* Clancey from between Brandvlei and Kenhardt. Macdonald (1957) observed that birds from 'the limited area of the Sclerophyll Region in the extreme south-west Cape are slightly darker and may eventually be separated as a distinct race'. Material recently received in the South African Museum from Mr. R. W. Rankine, collected near the Kalahari Game Reserve, suggested that the range of *damarensis* was wider than current literature indicated. Under the circumstances, it seemed advisable to assemble the available material and review the whole species; and to make a special point of obtaining a series of breeding birds from the restricted type locality of *flaviventris*, the Berg River (this being the first locality mentioned by Andrew Smith in his field notes).

Altogether, 152 skins were examined; and my thanks are due to the following for the loan of material: the Director, Durban Museum & Art Gallery; the Director, East London Museum; the Director, Kaffrarian Museum; the Director and Mr. M. P. S. Irwin, National Museum of Southern Rhodesia; the Director and Mr. R. Liversidge, Port Elizabeth Museum and Snake Park; the Director and Mrs. Campbell, Transvaal Museum. The work on which this paper is based was done while I was holding a Senior Bursary of the South African Council for Scientific and Industrial Research.

REVIEW OF THE MATERIAL

The broad pattern of variation in the Yellow Canary follows expectations in being lightest in the hot north and darkest in the colder south. Within that broad pattern, however, several more local patterns are visible.

The birds of the north-east were separated by Shelley as *marshalli* on the grounds that the males had slightly larger bills and yellower upper parts while

the females were paler and less heavily streaked below. I have found no significant difference, however, in the size of the bill; but the other distinctions hold.

Roberts then separated the north-west population as *damarensis*, in which the males were a clearer yellow than those of *marshalli* and the females were unstriped below, but often with a yellow wash. This is confirmed in the series I have examined.

Occupying an area south of the range of *damarensis* is a population in which the males are duller and darker above than *damarensis* but yellower than *marshalli*; and richer yellow below than either; while the females are less green above and white below. This is *aurescens* of Clancey.

South of *aurescens*, occupying the main plateau of the Karoo from east to west, is another form, the males of which are darker above and paler below and the females more heavily streaked than any of the preceding subspecies. This population gives place in the coastal strip from Still Bay to Oranjemund to another, which is smaller, the males paler, more lemon yellow below, and the females even more heavily streaked. The last is the typical *flaviventris*; and and Karoo population is without a name. I name it below, *quintoni*.

From the mountains of Basutoland, Roberts described *guillarmodi* as being darker above than *flaviventris* in the male and more heavily streaked below in the female, in which, too, the sides of the face are darker grey. He also noted that it, and a bird from Carnarvon, were larger than coastal birds from Tulbagh to Vanrhynsdorp. Only three males (one of them immature) and five females were available to me, but the heavy streaking below of the females is broadly confirmed by these specimens, which are more heavily streaked than *quintoni*, but no more so than *flaviventris*. They also appear to have less green suffusion above than either *quintoni* or *flaviventris*. The two adult males, however, appear to me to be indistinguishable from *flaviventris*, except on size.

CONCLUSIONS

The following subspecies are accordingly recognized:

1. *Serinus flaviventris flaviventris* (Swainson)

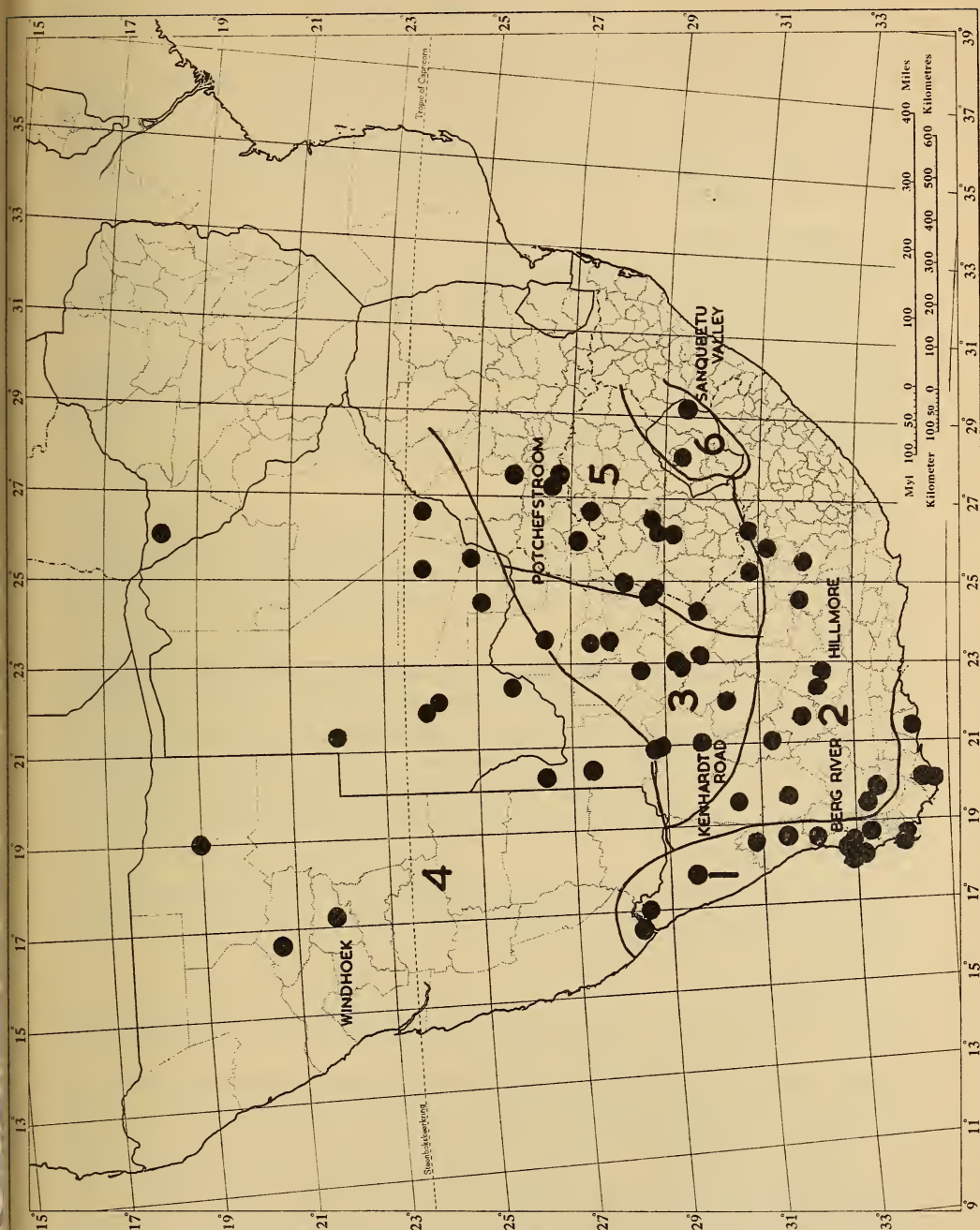
Loxia flaviventris Swainson, *Zool. Journ.*, 3, 1828: 348—South Africa (restricted to Berg River, S.W. Cape).

Range. The coastal strip from Oranjemund, just north of the mouth of the Orange River, to Still Bay, Riversdale District.

Characters. The male is dark above, like *quintoni*, from which it differs in being paler yellow, more lemon and less orange, below. The female is also similar above to *quintoni* but more heavily streaked below. Both sexes average smaller than the other forms.

Measurements:

23 ♂♂: Wing, 68–76, av. 71·6 mm.; tail, 46–56, av. 49·5; tarsus, 15–22, av. 18·8; culmen, 13–14, av. 13·8.

DISTRIBUTION OF THE SUBSPECIES OF *Serinus flaviventris* (Swains.)

Each dot represents a locality from which one or more specimens have been examined.

Type localities of described forms are named.

1. *flaviventris*

2. *quintoni*

3. *aurescens*

4. *damarensis*

5. *marshalli*

6. *guillarmodi*

10 ♀♀: Wing, 66–72, av. 68·9 mm.; tail, 49–58, av. 51·2; tarsus, 17–21, av. 18·9; culmen, 13–15, av. 14·0.

It will be noted that there is a considerable overlap in wing-lengths between this form and the next; but the males with wing-lengths in excess of 73 mm. and the females with wing-lengths in excess of 70 mm. are all from the eastern edge of the range—Springbok, Monazite Mine, Berg River; except one, from L'Agulhas.

Material examined:

South African Museum: 24 (Berg River, Cape Town, Swartklip, Zoetendalsvlei, Still Bay, Cape Flats, Wynberg, Langebaan, Leipoldtville, Monazite Mine, Annisfontein).

East London Museum: 7 (Malmesbury, Springbok, Sandkraal, Vanrhynsdorp-Bitterfontein).

Port Elizabeth Museum: 2 (Oranjemund).

National Museum of Southern Rhodesia: 1 (Langebaan).

2. *Serinus flaviventris quintoni* subsp. nov.

Range. The Karoo areas from Calvinia, the Cold Bokkeveld and Touws River east to Skietkuil, Murraysburg District, and Fish River Station. Intergrades with *marshalli* at Elandshoek, Aliwal North District, and with *aurescens* at Vanwyksvlei.

Characters. The male is dark above, like *flaviventris*, from which it differs in being richer yellow, more orange and less lemon, below. The female is also similar above to *flaviventris* but less heavily streaked below. Both sexes are larger than *flaviventris*. From *marshalli* and *aurescens*, the male differs in being more heavily streaked and less yellow above and not so rich a yellow as *aurescens* below. The female is darker above and more heavily streaked below than either *marshalli* or *aurescens*.

Type. In the South African Museum, Cape Town; ♂, Hillmore, Beaufort West, 22 September 1955, collected by J. M. Winterbottom; collector's number, 250; S.A.M. number, 20188.

Measurements:

25 ♂♂: Wing, 71–82, av. 75·8 mm.; tail, 49–59, av. 53·2; tarsus, 16–23, av. 18·9; culmen, 13–15, av. 14·1.

7 ♀♀: Wing, 71–79, av. 73·9 mm.; tail, 49–52, av. 50·2; tarsus, 16–20, av. 18·3; culmen, 13–15, av. 13·9.

Material examined:

South African Museum: 7 (Touws River, Hanover, Beaufort West (type), Cold Bokkeveld).

East London Museum: 23 (Calvinia, Fraserburg, Williston, Brandvlei, Brandvlei-Kenhardt, Touws River, Skietkuil, Fish River Station).

Durban Museum: 1 (Calvinia).

Rankine Collection:* 1 (Beaufort West).

Note. I name this subspecies after my friend Mr. W. F. Quinton, a keen ornithologist, on whose farm the type was collected.

3. *Serinus flaviventris aurescens* Clancey

Serinus flaviventris aurescens Clancey, *Durb. Mus. Novit.*, 5, 1958: 104-10 miles from Kenhardt, on Brandvlei Road.

Range. From Kenhardt and Olyvenhout Drift, east and north to Riverton, near Kimberley, and Kuruman; intergrading with *quintoni* at Vanwyksvlei, with *marshalli* at Riverton and with *damarensis* at Olyvenhout Drift and Kuruman.

Characters. Male less heavily streaked and lighter above than *quintoni*; female, lighter above and less heavily streaked below. From *marshalli*, the male is distinguished by being yellower and less streaked above and richer, deeper yellow below; the female is greyer above and whiter, less streaked, below.

Measurements:

8 ♂♂: Wing, 73-77, av. 74.7 mm.; tail, 50-56, av. 53.1; tarsus, 16-20, av. 17.1; culmen, 14-15, av. 14.1.

2 ♀♀: Wing, 72-73, av. 72.5 mm.; tail, 47-52, av. 49.5; tarsus, 16, av. 16.0; culmen, 14, av. 14.0.

Material examined:

Durban Museum: 5 (Riverton, Kenhardt (type), Niekerkshoop, Niekerkshoop-Griquatown).

East London Museum: 4 (24 miles south of Kakamas, Klippuit, Kuruman-Askham).

National Museum of Southern Rhodesia: 1 (Kuruman).

Intermediates, quintoni-aurescens:

Durban Museum: 4 (Vanwyksvlei).

Intermediates, aurescens-damarensis:

South African Museum: 2 (Olyvenhout Drift).

4. *Serinus flaviventris damarensis* Roberts

Serinus flaviventris damarensis Roberts, *Ann. Tvl. Mus.*, 8, 1922: 264-Windhoek.

Range. South West Africa (except the area at the mouth of the Orange River), Bechuanaland Protectorate, the extreme north-west corner of Southern Rhodesia and the extreme north and west of Griqualand West; intergrading with *aurescens* at Olyvenhout Drift and Kuruman.

Characters. The male is brighter and lighter above and paler yellow below than *aurescens*; and a clearer, brighter yellow below than *marshalli*. The female

* The Rankine collection will be divided between the South African Museum and the National Museum of Southern Rhodesia.

is greener above and yellower below than *aurescens*; and yellower and less striped below than *marshalli*.

Measurements:

- 19 ♂♂: Wing, 71-78, av. 75.2 mm.; tail, 47-58, av. 50.7; tarsus, 17-20, av. 18.1; culmen, 13-16, av. 14.0.
 7 ♀♀: Wing, 70-77, av. 73.1 mm.; tail, 50-55, av. 52.3; tarsus, 14-19, av. 16.7; culmen, 12-14, av. 13.1.

Material examined:

National Museum of Southern Rhodesia: 18 (Kakia, Ghanzi, 200 miles south of Francistown, Tsabong, 55 miles west of Kanye, Tsane, Lehututu, Molepole-Lephepe, 23 miles south of Letlaking).
 Transvaal Museum: 5 (Windhoek, Okahandja, Matetsi).
 Durban Museum: 2 (Otjomassu).
 South African Museum: 1 (Keetmanshoop).
 East London Museum: 1 (Kalahari Game Reserve).
 Rankine Collection*: 8 (Noeniput).

5. *Serinus flaviventris marshalli* Shelley

Serinus marshalli Shelley, *Bds. Afr.*, 3, 1902: 200—Potchefstroom.

Range. Western Transvaal, Orange Free State and the adjacent parts of the Cape Province (Fourteen Streams, Kimberley, Hopetown, Colesberg); intergrading with *aurescens* at Riverton and with *quintoni* at Elandshoek, Aliwal North District.

Characters. The male is greener and less heavily streaked above than *quintoni*; and the female is paler and with the underparts less heavily streaked. The male is greener, less yellow, above than *aurescens* and *damarensis*, and paler yellow below; the female is less streaked below than *damarensis* and greener above than *aurescens*.

Measurements:

- 26 ♂♂: Wing, 70-78, av. 75.1 mm.; tail, 47-59, av. 52.8; tarsus, 15-20, av. 18.3; culmen, 13-16, av. 14.0.
 6 ♀♀: Wing, 70-77, av. 73.2 mm.; tail, 51-54, av. 52.5; tarsus, 17-20, av. 18.8; culmen, 14, av. 14.0.

Material examined:

South African Museum: 5 (Orange River Station, Potchefstroom).
 Transvaal Museum: 12 (Brandfort, Bloemfontein, Wolmaransstad, Venterskroon, Bothaville, Fourteen Streams, Rustenburg, Hoeningsspruit).
 East London Museum: 10 (Rooipoort, Bloemfontein).
 Durban Museum: 3 (Riverton, Glen).

* The Rankine collection will be divided between the South African Museum and the National Museum of Southern Rhodesia.

Port Elizabeth Museum: 1 (Bloemfontein).

Kaffrarian Museum: 1 (Colesberg).

National Museum of Southern Rhodesia: 1 (Rustenburg).

6. *Serinus flaviventris guillarmodi* (Roberts)

Serinus flaviventris guillarmodi Roberts, *Ann. Tvl. Mus.*, 18, 1936: 256—
Sanqubetu Valley, Basutoland.

Range. The high mountains of Basutoland (*S. f. marshalli* occurs along the
Caledon River valley).

Characters. Broadly speaking, a *flaviventris* swelled to the size of *quintoni*;
but the upper parts of the female are darker, with less green wash, than those
of *flaviventris*. It averages larger than any of the other races.

Measurements:

2 ♂♂: Wing, 78–79, av. 78·5 mm.; tail, 50–55, av. 52·5; tarsus, 19, av. 19·0;
culmen, 13–14, av. 13·5.

5 ♀♀: Wing, 76–80, av. 77·0 mm.; tail, 53–58, av. 56·0; tarsus, 18–20,
av. 18·8; culmen, 14–15, av. 14·4.

Material examined:

Transvaal Museum: 3 (Sanqubetu Valley (Type), Maluti Mts.).

Durban Museum: 5 (40 miles east of Maseru).

REFERENCE

Macdonald, J. D. 1957. *A Contribution to the Ornithology of Western South Africa*, 1957.